

**In the Claims:**

All pending claims, whether amended, original, deleted or added are shown hereinbelow:

Please cancel claims 1-6 without prejudice or disclaimer to the subject matter thereof.

7. (Currently amended) A virtual knowledge management system using a computer, comprising:

a virtual knowledge base which stores a plurality of objects that are data entities for respective utilization by a plurality of users, and that belong to different object types, and control data that is provided corresponding to each of said object types, and that relates to the control of object operations performed by said users; and

a manager which has a plurality of types of functions for respectively performing a plurality of types of object operations including the display and preparation of said objects belonging to each object type in accordance with requests from said users;

wherein the respective functions of said manager control the respective operations for said objects

belonging to the respective object types in accordance with  
the control data of the corresponding object types;

~~The virtual knowledge management system according to  
claim 1,~~ wherein said objects belonging to one of said  
object types are email messages;

the respective email messages have type data which  
indicates one type selected from a plurality of specified  
types differing in whether or not replay deadline is set,  
and when said replay deadline is set, also have deadline  
data indicating the replay deadline and status data which  
indicates whether not the reply deadline has expired;

the function for displaying said email messages inside  
said manager displays the type data of the respective email  
messages and, when said email messages have the replay  
deadline data and status data, also displays the replay  
deadline and status of the respective email messages.

8. (Currently amended) The virtual knowledge  
management system according to claim 7 ~~4~~, wherein said  
objects belonging to one of said object types are email  
messages;

the respective email messages have reply/forwarding  
control data which relates to the reply to, or forwarding  
of, the respective email messages;

said manager has a reply/forwarding function for replying to or forwarding said email messages in accordance with requests from said users, and said reply/forwarding function is arranged so that this function controls the reply to or forwarding of the respective email messages on the basis of said reply/forwarding control data possessed by the respective email messages.

Please cancel claims 9-11 without prejudice or disclaimer to the subject matter thereof.

12. (Currently amended) A virtual knowledge management system comprising:

intensive data administration means for the intensive administration of various types of documents or data that exist in an enterprise;

a control data editing part which prepares and alters information flow control data involved in the control of the information flow among a plurality of users, and which registers said prepared or altered information flow control data in a memory device; and

an information flow control part which uses said information flow control data registered in said memory device to control the flow of said various types of

documents or data among a plurality of user terminals used  
by said plurality of users ~~The virtual knowledge management~~  
~~system according to claim 10~~, wherein said control data  
editing part has a mail communications control data editing  
part which prepares and alters mail communications control  
data that indicates desired limitations regarding the  
forwarding of, or reply to, email messages transmitted from  
the respective users as one type of said information flow  
control data, and associates the prepared or altered mail  
communications control data with email messages transmitted  
from the respective users, in response to requests from  
respective users; and

said information flow control part has a mail  
communications control part which controls the forwarding or  
reply operations of receivers of the respective email  
messages on the basis of the mail communications control  
data associated with the email messages transmitted from  
said respective users.

Please cancel claims 13-20 without prejudice of  
disclaimer to the subject matter thereof.

Claim 21 (New)            A virtual knowledge management  
system using a computer, comprising:

a virtual knowledge base which stores a plurality of objects that are data entities for respective utilization by a plurality of users, and that belong to different object types, and control data that is provided corresponding to each of said object types, and that relates to the control of object operations performed by said users; and

a manager which has a plurality of types of functions for respectively performing a plurality of types of object operations including the display and preparation of said objects belonging to each object type in accordance with requests from said users;

wherein the respective functions of said manager control the respective operations for said objects belonging to the respective object types in accordance with the control data of the corresponding object types,

wherein said control data corresponding to the respective object types includes:

class definition data which defines one or more classes which correspond to one or more attribute items possessed by said objects belonging to the respective object types; and

class security setting data which defines the classes that can be accessed or that cannot be accessed by the respective users among said one or more classes;

said objects belonging to the respective object types have values of said one or more classes defined by said class definition data corresponding to the respective object types; and

said function used to display said objects inside said manager is arranged so that the values of classes that can be accessed by the respective users are selected from the values of said one or more classes possessed by said objects belonging to the respective object types, and are displayed to the respective users, on the basis of said class security setting data corresponding to the respective object types.

Claim 22 (New) The virtual knowledge management system according to claim 21, wherein said control data corresponding to the respective object types includes:

folder definition data which defines one or more folders in which said objects belonging to the respective object types are stored; and

folder security setting data which defines the folders that can be accessed or that cannot be accessed by the respective users among said one or more folders;

said manager further has a folder operating function for operating said one or more folders defined by said folder definition data corresponding to the respective object types in accordance with requests from the respective users; and

said folder operating function is arranged so that folders are displayed with a distinction being made between folders that can be accessed and folders that cannot be accessed by the respective users on the basis of said folder security setting data corresponding to the respective object types, and so that only folders that can be accessed by the respective users among said one or more folders that are displayed are opened in accordance with requests from the respective users.

Claim 23. (new)       The virtual knowledge management system according to claim 21, wherein:

said control data corresponding to the respective object types includes function security setting data which defines functions that can be accessed or that cannot be

accessed by the respective users among said plurality of types of functions inside said manager; and

said manager\_is arranged so that only the functions that are defined by said function security setting data corresponding to the respective object types as being accessible by the respective users, among said plurality of types of functions for the respective object types inside said manager, can be operated in accordance with requests from the respective users.

Claim 24 (New) A virtual knowledge management system according to claim 21, wherein: said control data corresponding to the respective object types includes:

form definition data which defines one or more forms each of which corresponds to an aggregates of one or more selected classes selected from said classes defined by said class definition data; and

form security setting data which defines a form or forms that can be accessed or that cannot be accessed by the respective users among said one or more forms defined by said form definition data; and

said function used to display said objects inside said manager is arranged so that the forms that can be accessed by the respective users according to said form security



setting data are selected from the one or more forms defined by said form definition data, and are displayed to the respective users,

said respective forms displayed to the respective users display the values of the selected classes of said objects, said selected classes being included in the displayed form and can be accessed by the respective users according to said class security setting data.

Claim 25. (New) The virtual knowledge management system according to claim 21, wherein:

said objects belonging to one of said object types are document objects which can be associated with document files;

the respective document objects have type data which indicates one type selected from a plurality of specified types differing in the numbers or types of associated document files, and also have association data which indicates the association with one or more document files in cases where the document objects are associated with said one or more document files;

the function for displaying said document objects inside said manager displays the types of the respective document objects on the basis of said type data of the

respective document objects, and displays the document files associated with the respective document objects on the basis of said association data of the respective document objects, and opens said associated document files in accordance with requests from said users.

Claim 26. (New)       The virtual knowledge management system according to claim 25, wherein: said plurality of specified types include

    a single sheet object that is associated with a document file having a single sheet,

    a multi sheet object that is associated with a document file having a plurality of sheets,

    a multi document object that is associated with a plurality of document files of which information is different,

    a multi representation object that is associated with a plurality of document files if which formats are different

    an annotation object that is associated with a document file or a set of document files which expresses an annotation or annotations accompanying another document object, and

a registered object that is not yet associated with an actual document file.

Claim 27. (New) A virtual knowledge management system according to claim 26, wherein:

when a user who is allowed to perform a function of opening files, selects a document file to be opened from said document files associated with a displayed document object which is of type of said multi representation object, the function for displaying said document objects inside said manager opens all of the document files associated with said displayed document object.

Claim 28. (New) The virtual knowledge management system according to claim 21, wherein:

said objects belonging to one of said object types are business processes which respectively have one or more sets of workflow model data that respectively define the flow of work among a plurality of users;

said objects belonging to another one of said object types are tasks which have task data that defines the work that can be performed by said users

said objects belonging to another one of said object types are projects, these respective projects are

associated with one or more of said business processes, and with one or more of said tasks respectively assigned to one or more of said users as defined by the workflow data of the respective business processes;

said manager further has a project control function for controlling the progress of the respective projects in accordance with requests from said users; and

said project control function is arranged so that this function prepares and displays a task list that lists the tasks assigned to each of the users on the basis of said one or more business processes and said one or more tasks associated with the respective projects, and so that this function updates said task list for the respective users in accordance with input indicating the initiation or completion of tasks from the respective users.

said knowledge data base further stores a project administration table which includes a plurality of users who execute one or more projects, a plurality of tasks which must be executed by the plurality of users, an execution sequence for execution of the tasks by said plurality of users, and status of said plurality of tasks;

said project control function comprises,

means for displaying said task list of tasks which each of said users can execute upon a user terminal of said user, based upon said project administration table;

means for receiving input from each said user which indicates that said task has ended, and setting the status of said task in said project administration table to ended;

means for checking, based upon said project administration table, whether or not all of tasks for each of said users have ended; and

means for, if some user exists for whom all of the tasks have ended, based upon said project administration table, specifying a user for execution next in sequence, and updating said task list which is displayed upon said user terminal of said specified user to a task list which includes a task which said user can newly start.

Claim 29. (New) The virtual knowledge management system according to claim 28, wherein:

said project administration table further stores a reference value or values to one or more deliverable document objects which are deliverables of a certain task,

said project control function further comprises,

means for storing said one or more deliverable document objects in said knowledge data base; and

means for storing said reference value or values to said one or more deliverable document object associated with said certain task in said project administration table.

Claim 30. (New)        A virtual knowledge management system using a computer, comprising:

    a virtual knowledge base which stores a plurality of objects that are data entities for respective utilization by a plurality of users, and that belong to different object types, and control data that is provided corresponding to each of said object types, and that relates to the control of object operations performed by said users; and

    a manager which has a plurality of types of functions for respectively performing a plurality of types of object operations including the display and preparation of said objects belonging to each object type in accordance with requests from said users;

wherein

    the respective functions of said manager control the respective operations for said objects belonging to the respective object types in accordance with the control data of the corresponding object types,

wherein:

said objects belonging to one of said object types are document objects which can be associated with document files;

the respective document objects have type data which indicates one type selected from a plurality of specified types differing in the numbers or types of associated document files, and also have association data which indicates the association with one or more document files in cases where the document objects are associated with said one or more document files;

the function for displaying said document objects inside said manager displays the types of the respective document objects on the basis of said type data of the respective document objects, and displays the document files associated with the respective document objects on the basis of said association data of the respective document objects, and opens said associated document files in accordance with requests from said users.

Claim 31. (New)      The virtual knowledge management system according to claim 25, wherein: said plurality of specified types include

a single sheet object that is associated with a document file having a single sheet,

a multi sheet object that is associated with a document file having a plurality of sheets,

a multi document object that is associated with a plurality of document files of which information is different,

a multi representation object that is associated with a plurality of document files if which formats are different,

an annotation object that is associated with a document file or a set of document files which expresses an annotation or annotations accompanying another document object, and

a registered object that is not yet associated with an actual document file.

Claim 32. (New) A virtual knowledge management system according to claim 31, wherein:

when a user who is allowed to perform a function of opening files, selects a document file to be opened from said document files associated with a displayed document object which is of type of said multi representation (MR) object, the function (S17 - S21 in Fig. 59) for displaying



said document objects inside said manager (4 (particularly 11)) opens all of the document files associated with said displayed document object.

Claim 33. (New)        The virtual knowledge management system according to claim 30, wherein:

said objects belonging to one of said object types are business processes which respectively have one or more sets of workflow model data that respectively define the flow of work among a plurality of users;

said objects belonging to another one of said object types are tasks which have task data that defines the work that can be performed by said users

said objects belonging to another one of said object types are projects, these respective projects are associated with one or more of said business processes, and with one or more of said tasks respectively assigned to one or more of said users as defined by the workflow data of the respective business processes;

said manager further has a project control function for controlling the progress of the respective projects in accordance with requests from said users; and

said project control function is arranged so that this function prepares and displays a task list that lists the

tasks assigned to each of the users on the basis of said one or more business processes and said one or more tasks associated with the respective projects, and so that this function updates said task list for the respective users in accordance with input indicating the initiation or completion of tasks from the respective users.

said knowledge data base further stores a project administration table which includes a plurality of users who execute one or more projects, a plurality of tasks which must be executed by the plurality of users, an execution sequence for execution of the tasks by said plurality of users, and status of said plurality of tasks;

said project control function comprises,

means for displaying said task list of tasks which each of said users can execute upon a user terminal of said user, based upon said project administration table;

means for receiving input from each said user which indicates that said task has ended, and setting the status of said task in said project administration table to ended;

means for checking, based upon said project administration table, whether or not all of tasks for each of said users have ended; and

means for, if some user exists for whom all of the tasks have ended, based upon said project administration table, specifying a user for execution next in sequence, and updating said task list which is displayed upon said user terminal of said specified user to a task list which includes a task which said user can newly start.

Claim 34. (New) A virtual knowledge management system using a computer, comprising:

a virtual knowledge base which stores a plurality of objects that are data entities for respective utilization by a plurality of users, and that belong to different object types, and control data that is provided corresponding to each of said object types, and that relates to the control of object operations performed by said users; and

a manager which has a plurality of types of functions for respectively performing a plurality of types of object operations including the display and preparation of said objects belonging to each object type in accordance with requests from said users;

wherein the respective functions of said manager control the respective operations for said objects

belonging to the respective object types in accordance with the control data of the corresponding object types,

wherein:

said objects belonging to one of said object types are business processes which respectively have one or more sets of workflow model data that respectively define the flow of work among a plurality of users;

said objects belonging to another one of said object types are tasks which have task data that defines the work that can be performed by said users

said objects belonging to another one of said object types are projects, these respective projects are associated with one or more of said business processes, and with one or more of said tasks respectively assigned to one or more of said users as defined by the workflow data of the respective business processes;

said manager further has a project control function for controlling the progress of the respective projects in accordance with requests from said users; and

said project control function is arranged so that this function prepares and displays a task list that lists the tasks assigned to each of the users on the basis of said one or more business processes and said one or more tasks associated with the respective projects, and so that this

function updates said task list for the respective users in accordance with input indicating the initiation or completion of tasks from the respective users.

said knowledge data base further stores a project administration table which includes a plurality of users who execute one or more projects, a plurality of tasks which must be executed by the plurality of users, an execution sequence for execution of the tasks by said plurality of users, and status of said plurality of tasks;

said project control function comprises,

means for displaying said task list of tasks which each of said users can execute upon a user terminal of said user, based upon said project administration table;

means for receiving input from each said user which indicates that said task has ended, and setting the status of said task in said project administration table to ended;

means for checking, based upon said project administration table, whether or not all of tasks for each of said users have ended; and

means for, if some user exists for whom all of the tasks have ended, based upon said project administration table, specifying a user for execution next in sequence, and updating said task list which is displayed

upon said user terminal of said specified user to a task list which includes a task which said user can newly start.

Claim 35. (New)       The virtual knowledge management system according to claim 34, wherein:

      said project administration table further stores a reference value or values to one or more deliverable document objects which are deliverables of a certain task,

      said project control function further comprises,  
      means for storing said one or more deliverable document objects in said knowledge data base; and

      means for storing said reference value or values to said one or more deliverable document object associated with said certain task in said project administration table.